ENERGY POLICY UPDATE

MARCH 31, 2014

The Energy Policy Update Electronic Newsletter is published by the Arizona Governor's Office Of Energy Policy and is provided free of charge to the public. It contains verbatim excerpts from international, domestic energy, and environment-related publications that are reviewed by Community Outreach Personnel. For inquiries, call 602-771-1143 or toll free to 800-352-5499. To register to receive this newsletter electronically or to unsubscribe, email Gloria Castro.

UPCOMING WEBINARS

U.S Dept. of Energy Webinar:
Engaging Building Occupants to Reduce Energy Use
Tuesday, April 1, 2014
3:00 PM – 4:00 PM EST
Click here to register.

State & Local Energy Efficiency Action Network Webinar:
Behavior-Based Energy Efficiency
Thursday, April 3, 2014
1:00 PM – 2:15 PM MST
Click here to register.

CONTENTS

The Arizona Republic now has limited access. As such, links may or may not work.

ARIZONA-RELATED

Energy Efforts Making a Difference in Arizona

[Kingman Daily Miner, Mar. 26] PHOENIX – Energy-efficiency requirements, rules on auto-emissions and policies promoting renewable energy helped Arizona prevent 3.5 million metric tons of carbon dioxide from entering the atmosphere in 2012, according to a report by an environmental group. However, Bret Fanshaw, state advocate for Environment Arizona, said the state should be doing even more to curb greenhouse gas emissions. "I think it's a great start, but the writing is on the wall: Arizona should be looking for more ways to reform," he said. The Environment America Research and Policy Center assessed clean-energy initiatives and greenhouse gas emissions in each state to develop its estimates. Of Arizona's total, the report attributed a savings of 2.18 million metric tons of carbon dioxide to energy-efficiency requirements and standards, while it said clean-cars programs and renewable-energy policies were responsible for savings of 720,000 and 630,000 metric tons, respectively, during 2012.

Kinder Morgan Set for $1 Billion Expansion of Arizona Pipeline

[Phx Business Journal, Mar. 26] Kinder Morgan Energy Partners LP (NYSE: KMP) will spend about $1 billion to expand its carbon dioxide network with a new 213-mile pipeline. The 16-inch diameter Lobos Pipeline will transport carbon dioxide from the company's St. Johns source field in Apache County, Ariz., to its Cortez Pipeline in Torrance County, N.M., and will have an initial capacity of 300 million standard cubic feet per day. Houston-based Kinder Morgan will spend about $300 million on the pipeline and about $700 million to drill wells and build field gathering, treatment and compression facilities at the St. Johns field.

Phoenix Wants To Divert More Trash from Landfills

A key component of Phoenix's push to move less trash to landfills could cost about $13 million over four years, according to a partnership plan among Arizona State University, the city and the private sector. Phoenix wouldn't pay the entire amount because the plan calls for the private sector to finance new technologies that deliver greater diversion rates. The city would build a new facility at the 27th Avenue Transfer Station, 3060 S.

27th Ave., that would house the equipment, according to city officials. The officials said a one-year contract that spells out each entity's role is not finalized. Though the pact, named the Partnership Resource Innovation and Solution Network, had been scheduled to start this month, city leaders said the agreement won't be ready until May. The partnership is a chance for Phoenix to make money from trash, said District 3 Councilman Bill Gates, who presides over the City Council's Finance, Efficiency, Economy & Sustainability Subcommittee. "In light of the budget deficit, this is an opportunity to work with the private sector and experts in other fields to allow the city to capitalize on the potential to receive a return revenue in exchange for our garbage and processes," Gates said. "It will allow for the cultivation of new businesses and look at the innovative and best practices of other cities on a number of different items that are beneficial for the region, (such as) solid waste, water, wastewater and energy." The partnership is part of Phoenix's goal of diverting 40 percent of waste from landfills by 2020. Today, the rate stands at 18 percent. The partnership is one of many programs aimed at reducing future costs of handling waste as Phoenix's population grows, including acquisition of new sites for landfills, as well as promoting more environmentally friendly practices.

Regulators Plan for Future of Energy

[AzCentral.com website, Mar. 22] If Arizona regulators struggled with how much to bill 20,000 or so customers with solar panels, imagine the fight when customers are able to generate their own power with backyard hydrogen fuel cells or store their solar power in batteries and disconnect from their utility at night. Those are some of the concerns prompting Arizona Corporation Commissioner Bob Burns' inquiry into emerging technologies that threaten to upend the way electricity is generated, sold and regulated. Hearings began Thursday, with experts from several technology companies giving presentations to the commission for informational purposes only. Many of the technologies take revenue away from electric companies but rely on them for consistent power during times when renewable electricity can't be produced. Commissioners are considering how they might adjust policies to allow new technologies to thrive while keeping utilities solvent.

Tesla Factory Search Focuses on Rail Access, Distant Suburbs

[Phoenix Business Journal, Mar. 24] If Tesla Motors lands its $5 billion battery factory in the Phoenix area, it will likely be in an outlying town such as Buckeye or Casa Grande -- one with plenty of available desert land and railroad access to California. Multiple sources familiar with Tesla’s site selection peg far West Valley or Pinal County locations adjacent to railroad links as the focus of the electric carmaker’s search in the Valley. There are development plans and a proposed Union Pacific railroad yard project near Picacho Peak in Pinal County, and a number of large parcels of land are available in Buckeye and other West Valley markets. Tesla also is looking at sites in Nevada, Texas, New Mexico and possibly the Tucson area for the 6.500-worker battery plant that could encompass as much 10 million square feet. Tesla officials did not respond to requests for comment.

U of A To Host Water Management Workshop

[Herald/Review, Mar. 28] Bisbee — The University of Arizona Water Resources Research Center (WRRC) and the Hydrologic Research Center of San Diego will hold a series of water management workshops across the state next month, including one in Sierra Vista on April 30. Though the project area is the Santa Cruz basin, the WRRC team is hopeful that the research conducted there will be helpful to other areas of the Southwest, including the San Pedro basin. The idea is to offer water managers an understanding of the implications of climate change on surface water flows and groundwater recharge through a collaborative development process that includes public input. According to a project explanation by U of A’s Sharon Megdal, S. Eden, C. Castro and K. Chief and Hydrologic Research Center’s Eylon Shamir, the idea is to integrate new climate modeling scenarios for water resource planning management in semi-arid areas of the Southwest. Historical accounts and data are no longer reliable due to the

changing climate and environment. So a new methodology needs to be developed that takes the changing weather and rainfall amounts into account for proper water management.

Wastewater with Purpose

Sewer water is turned into high-quality effluent at treatment plant

[TriValleyCentral.com, Mar. 24] Jay Mull has seen some of the strange things that Casa Grande residents flush down their toilets. Jewelry, money, rags and even tires are sometimes deposited in the city's sewer system along with millions of gallons of wastewater. "Toys, not surprisingly, are very common. We found a large rubber alligator once and a dash mat from a car," said Mull, Casa Grande's chief wastewater plant operator. Once flushed into the system, the items wind up at the city's water reclamation facility, a sprawling 38-acre complex on West Kortsen Road where sewer discharge is strained, processed and turned into a high-quality effluent. With the 2012 expansion of the facility, the plant can handle up to 12 million gallons of water a day. It currently processes about 4 million gallons daily in the summer and about 6 million in the winter. The expansion included refined cleaning processes and an upgraded effluent rating. "We went from a B-plus to an A-plus," Mull said. A-plus effluent is almost drinking water quality. Almost. And while city employees claim the plant's treated effluent is almost clean enough to drink, Casa Grande residents won't find their tap water replaced with recycled wastewater anytime soon. "I don't think the community is ready for toilet-to-tap drinking water," said Kevin Louis, Casa Grande public works director. However, recycled water can be a municipal money-maker and Casa Grande's upgraded effluent quality means the city now has more options in what it can do with the cleaned water. "Water is a commodity. In the desert, it's gold," Louis said. Of the millions of gallons of wastewater the facility receives and cleans each day, some is saved and reused at the plant. About 800,000 gallons a day are delivered to the ponds at Dave White Municipal Golf Course to irrigate the course. Another 250,000 gallons are sent to the Salt River Project power plant nearby, Louis said.

Water Being Sent to Parched Colorado River Delta

[Yuma Sun, Mar. 26] These days there's a bit more water flowing downstream in the Colorado River, the result of an historic agreement between the U.S. and Mexico to engineer an experimental spring flood in an effort to re-establish riparian habitat along the river in both countries and in the Colorado River Delta region of Mexico. As of Sunday, the United States and Mexico began releasing some 105,000 acre-feet — approximately 0.7 percent of the annual average flow of the Colorado River — to the delta below Morelos Dam on the U.S.–Mexico border near Algodones. The pilot "pulse flow" will peak for several days at a high flow, and then will last for nearly eight weeks, mostly at a reduced flow rate. This historic event, stemming from the groundbreaking, multi-faceted Colorado River agreement negotiated between the U.S. and Mexico known as Minute 319, will help with efforts by the two countries to re-establish riparian habitat, providing benefits to wildlife species and communities along the river, according to a news release. The two governments are acting through the U.S. and Mexican sections of the International Boundary and Water Commission.

ALTERNATIVE ENERGY & EFFICIENCY

First Solar's Revised Panel Efficiency Roadmap Could Bode Well for Its Future

[Forbes, Mar. 24] During its analyst day event held last week, First Solar presented an updated roadmap for its Cadmium Telluride (Cd-Te) thin film panels, indicating that conversion efficiencies, which have typically been one of the company's weak spots, could improve significantly going forward. If the company is able to execute on its targets, we believe that it could emerge as one of the technology leaders in the industry, in addition to being one of the lowest cost producers. Some of the key attributes that solar panel manufacturers compete on include price, conversions efficiency, temperature coefficients and aesthetics. Conversion efficiency is typically the most touted and advertised feature. All else being equal, a higher efficiency panel converts more sunlight

into electricity and has a smaller size (surface area) for every watt of rated power output. Besides this, higher efficiency panels help to reduce the balance of systems cost (structural components, electrical equipment and labor costs) for a solar installation, which is a function of panel size.

High-Bay LEDs Come into their Own

[Energy Manager Today, Mar. 28] In 2013 several high-bay LED products were launched that provide exceptional quality in a price range that allows for acceptable paybacks from energy savings, according to Navigant Research, which predicts the high-bay lighting market is set for a rapid shift, similar to the shift toward LED lighting that has already begun in commercial buildings. The importance of the falling prices of LED luminaires and lamps cannot be overstated, finds Navigant in its report "High-Bay Lighting: Energy Efficient Lighting and Lighting Controls for Warehouse, Industrial, Sporting, Retail, and Transportation Facilities." Within the next 3 years, falling prices and rising efficacy will begin to generate savings that offer payback periods of less than 2 years. That will create a tipping point for the large-scale adoption of LED lighting within high-bay applications.

Latin America's Largest Solar Power Plant Goes Online in Mexico

[Fox News Latino, Mar. 28] Latin America's largest solar power plant, a facility with 39 MW of generating capacity, has gone online in the northwestern Mexican state of Baja California Sur. The Aura Solar I photovoltaic power plant was inaugurated by Mexican President Enrique Peña Nieto on Wednesday and will supply electricity to the city of La Paz. The energy industry reforms implemented last December will help lead to "more energy generation, cleaner energy and, above all, cheaper energy to help make Mexico a more competitive country," Peña Nieto said. The goal is to turn Mexico into "a country that attracts greater investment for the development and creation of jobs," the president said.

Multimillion Dollar Order for 9.4 MW Biogas CHP Cogeneration Plant to be Installed in Grove City, Ohio for the Largest Waste-to-Energy Recycling Facility in the World

2G CENERGY Power Systems Technologies Inc., a 2G Energy AG Group Company, announced today that it received a large order with a total amount of nearly 8 Million USD.

[PR.com, Mar. 28] St. Augustine, FL – During the second half of 2013, 2G CENERGY secured several large contracts and the companies' order books are bulging (+54% compared to Jan 2013), significantly strengthening 2G's position in the US market. 2G CENERGY's order books also include a wide range of other new major, midsize and smaller contracts in addition to this remarkably larger project. As of January 2014, 2G CENERGY reached a market share of more than 40%, being the preferred supplier of advanced biogas energy conversion systems and cogeneration technologies for all new biogas plants constructed in North America. Gemini, a sustainable project design and development company based in Orlando, Florida, has entered into an agreement with the Solid Waste Authority of Central Ohio (SWACO) to build the world's largest waste-to-energy and materials recovery facility of its kind on SWACO property in Grove City, Ohio. The agreement sets the stage for integrating a viably sustainable solution that reduces SWACO's use of landfills and will eventually eliminate the need for their use by replacing them with a state-of-the-art waste management facility. What originally began under the project designation "Cardinal" was later assigned the name "Gemini Synergy Center". Gemini will build both a waste receiving facility and a waste stream recovery plant including anaerobic digesters, which have been dubbed the 'Center for Resource Recovery and Recycling' or COR3. Both buildings will have a combined area of over 185,000 square feet. The project is divided into Phase 1 and 2. Initially, the plant will be able to process up to 2,000 tons per day (about 30% of the current waste stream), with plans to process the entire waste stream in the future - thus achieving nearly 100 percent recycling of all the waste received. After recyclable materials are recovered, which include metals and plastics, the balance of the organic waste will be preprocessed for use in anaerobic digesters.

New Report Finds Energy Efficiency is America's Cheapest Energy Resource
[Sustainable Cities Network, Mar. 30] WASHINGTON, D.C. – According to a new report released by the American Council for an Energy-Efficient Economy, energy efficiency is the cheapest method of providing Americans with electricity. Energy efficiency programs aimed at reducing energy waste cost utilities only about three cents per kilowatt hour, while generating the same amount of electricity from sources such as fossil fuels can cost two to three times more.

ENERGY/GENERAL

Beneath Cities, a Decaying Tangle of Gas Pipes
[NY Times, Mar. 23] It is a danger hidden beneath the streets of New York City, unseen and rarely noticed: 6,302 miles of pipes transporting natural gas. Leaks, like the one that is believed to have led to the explosion that killed eight people in East Harlem this month, are startlingly common, numbering in the thousands every year, federal records show. Consolidated Edison, whose pipes supplied the two buildings leveled by the explosion, had the highest rate of leaks in the country among natural gas operators whose networks totaled at least 100 miles, according to a New York Times analysis of records collected by the federal Department of Transportation for 2012, the most recent year data was available. The chief culprit, according to experts, is the perilous state of New York City's underground network, one of the oldest in the country and a glaring example of America's crumbling infrastructure.

Electric Transmission Investment on the Rise
[EL& P, Mar. 27] Investor-owned electric utility companies are continuing to make investments to build out transmission infrastructure, and update the nation's transmission network. According to a report by the Edison Electric Institute (EEI), total transmission investment among EEI members in 2012 reached $14.8 billion (real $2012). The report also indicates that EEI members' year-over-year transmission investment is expected to hit a new peak in 2013 of about $17.5 billion. "The high level of investment in our nation's transmission infrastructure will enable electric utilities to improve reliability, relieve congestion, facilitate wholesale market competition, and support a diverse and changing generation portfolio for the benefit of electricity customers," said EEI Vice President of Energy Delivery Jim Fama. "Investments to deploy new technologies, such as advanced monitoring systems, are helping to make the grid more flexible and resilient."

INDUSTRIES AND TECHNOLOGIES

Car Companies Take Expertise in Battery Power beyond the Garage
[NY Times, Mar. 25] DAVIS, CA – As more homeowners generate their own electricity from solar panels, they still need power from a utility after the sun goes down. Now, automakers say they may have an answer, by storing that carbon-free energy in electric car batteries for later use. Honda on Tuesday is introducing an experimental house in this environmentally conscious community to showcase technologies that allow the dwelling to generate more electricity than it consumes. It is one example of the way solar companies and carmakers are converging on a common goal: to create the self-sufficient home, with a car's battery as the linchpin. With buildings and transportation accounting for 44 percent of the United States' greenhouse gas emissions, car companies increasingly view all-electric and hydrogen fuel-cell cars as vehicles that will meet environmental mandates and lead to development of new energy services and products beyond the garage. Ford, Tesla Motors and Toyota are pursuing strategies similar to that.

H2USA Driving Infrastructure for Hydrogen Fuel Cell Vehicles
[Fierce Energy, Mar. 24] A consortium of energy companies, auto manufacturers, government laboratories, and other stakeholders is driving the acceleration of the rollout of an infrastructure for hydrogen-powered vehicles and related technologies. H2USA was launched last year by the Department of Energy (DOE) and other stakeholders to

focus on furthering the infrastructure for hydrogen-powered vehicles, such as those powered by fuel cells. So far more than two dozen entities have joined H2USA, including the American Gas Association and national laboratories such as the DOE's Pacific Northwest National Laboratory, the National Renewable Energy Laboratory, Argonne and Sandia. Fuel cells are becoming more common in a variety of applications, including as back-up energy sources in buildings and cell towers, as well as powering cars and trucks.

Solar Decathlon Houses Make Up a Solar Village To Test Microgrid Technology

A new project at Missouri Science and Technology will be used as a test ground for innovative research on advancing renewable energy, energy storage and microgrid technology.

[RenewableEnergyWorld.com , Mar. 31] New Hampshire, USA -- In yet one more example of the rising interest in how microgrids that incorporate renewable energy and energy storage will change the energy landscape, Missouri University of Science and Technology (MST) has created what it says is the first “Solar Village” in the U.S. Consisting of a grouping of Solar Decathlon houses that students at MST built for competitions between 2002 and 2009, the solar village is a project created in collaboration with Missouri S&T students, faculty and staff, along with members of the university’s microgrid advisory board (Investor-owned utility Ameren, City Utilities of Springfield, Rolla Municipal Utilities and Electric Power Research Institute), several Missouri manufacturers (Milbank and Ford Motor Company) and the Army Corps of Engineers. The engineer-of-record and installer for the project was Microgrid Solar, a U.S. and Caribbean solar developer, installer, and engineering company based in St. Louis, MO. The project has been in the works for two years and is expected to be complete by the end of next month. A utility grant and the DOE Sunshot Initiative contributed funding for the project.

LEGISLATION AND REGULATION

First LNG Export Conditional Approval Given on West Coast

[Houston Business Journal, Mar. 24] The U.S. Department of Energy has conditionally authorized the first liquefied natural gas export terminal for the West Coast. Most of the previous approvals have been on the Gulf Coast in southeastern Texas and Louisiana, but the new approval for the Jordan Cove Energy Project LP in Oregon would mean exporting LNG to Asia and beyond from the Pacific Northwest. The Jordan Cove application was next in the order of precedence for approval after the Energy Department last month conditionally approved California-based Sempra Energy (NYSE: SRE) and its subsidiary, Cameron LNG, to export liquefied natural gas from Hackberry, La., near the Texas border.

The Tally Is In: Ethanol 'Blend Wall' Cost Refiners At Least $1.35 Billion

[Reuters, Mar. 31] NEW YORK – Last year's spike in the price of ethanol blending credits cost independent refiners at least $1.35 billion, more than three times as much as the year before, according to a Reuters' review of securities filings. The tally, which has not been previously reported, is a conservative estimate as it includes only nine refiners that disclosed the figures. Others affected did not specify the cost of buying Renewable Identification Number (RINs), paper credits used to meet quotas for blending biofuel into gasoline and diesel. While it has long been clear that refiners lacking the facilities to blend their own fuel would end up footing a billion-dollar-plus RINs tab last year, the data may give the companies more firepower as they urge regulators to stick to a proposal to cut back ethanol requirements for this year. A final rule is due to be completed in the coming months, and some analysts say the U.S. Environmental Protection Agency (EPA) could alter the proposal after outcry from the biofuel lobby.

U.S. Energy Dept. To Offer Loan Aid to Renewable Energy Companies

[Reuters, Mar. 28] The U.S. Energy Department will soon issue a plan to offer loan aid for renewable energy projects, Energy Secretary Ernest Moniz said on Friday, doubling down on investments that have drawn intense criticism over past government-backed

business flops. A department loan program funded by the 2009 economic stimulus law that backed solar, wind and geothermal projects was widely attacked by Republicans after the high-profile failure of solar panel manufacturer Solyndra. Despite the bankruptcy of Solyndra and other recipients of department funds, the Obama administration has stressed that most of its energy investments have been successful, refusing to bow to calls to scrap its remaining loan programs. "We will have another call in the loan program for renewables and efficiency in the not-too-distant future," Moniz said at a policy forum for the American Council on Renewable Energy. He did not specify how much loan aid would be offered or specify the type of projects the department would seek to fund. The department issued a plan last year to offer up to $8 billion in loan assistance for fossil fuel projects that reduce greenhouse gas emissions. No loan guarantees have been issued under that proposal yet.

Western Governors Express Concern over Proposed Rule on Clean Water Act
[WGA website, Mar. 25] Western Governors today expressed concern to the Environmental Protection Agency and U.S. Army Corps of Engineers that a proposed rule clarifying protections under the Clean Water Act for streams and wetlands was developed without sufficient consultation with states and could impinge on state authority. The concerns were delivered to EPA Administrator Gina McCarthy and Jo-Ellen Darcy, Assistant Secretary of the Army (Civil Works), in a letter signed by Colorado Gov. John Hickenlooper (Western Governors' Association Chairman) and Nevada Gov. Brian Sandoval (WGA Vice Chairman).

WESTERN POWER

After Conflicts with Mortgage Lenders, California Restarts Residential PACE
[The Energy Collective, Mar. 29] California officials say the state's stalled program for financing residential efficiency retrofits through property taxes is ready to scale once again. After more than three years of conflict between large mortgage lenders and efficiency advocates, California is announcing that homeowners will soon be eligible for property-assessed clean energy (PACE) loans through the CaliforniaFIRST program. Previously, only commercial building owners and multi-family housing units could participate. The addition of homeowners is a big breakthrough for residential PACE, which supports energy efficiency loans that get paid back through incremental increases to property taxes over the span of twenty years. The concept originated in Berkeley, California in 2008 and swept across the country before getting thwarted by federal housing regulators.

Fed Report Slams Safety Lapses at New Mexico Nuclear Facility
[LA Times, Mar. 15] March 16 --Workers at a New Mexico nuclear waste storage facility that suffered an underground fire and radiation leak last month lack adequate safety training, oversight or a proper response plan for emergencies, a federal investigation has found. In a report released Friday, Energy Department investigators faulted employees at the Waste Isolation Pilot Plant, or WIPP, near Carlsbad , for failing to maintain equipment and failing to correct procedures regulators have faulted before -- issues that became apparent when a truck caught fire Feb. 5 followed by a radiation leak Feb. 14. The report said it was unclear if the two events were connected. No one was seriously injured in either case and officials at the site said no radiation leaked to the surface. The plant has been closed since the leak and authorities said they would continue to investigate.

Moapa Paiute Tribe, LADWP and First Solar Break Ground on 250MW Solar Project
[ENR Southwest, Mar. 24] The project is located on the Moapa River Indian Reservation just north of Las Vegas, and has a Power Purchase Agreement (PPA) with the LADWP to deliver clean, solar energy for 25 years to the City of Los Angeles. Today's event marks a very important milestone for Nevada, the Moapa Band of Paiutes, and tribal nations throughout the country," said Reid. "The Moapa Southern Paiute Solar project is the first utility-scale solar project on tribal land and will deliver much needed economic benefits to the Tribe and Nevada. It will also create about 400 construction jobs, and

replace dirty energy with clean solar power." The power plant, anticipated to be fully operational by the end of 2015, is expected to generate enough clean solar energy to serve the needs of more than 93,000 homes. This amount of renewable energy will displace approximately 313,000 metric tons of carbon dioxide (CO2) annually—the equivalent of taking about 60,000 cars off the road. The project will play a key role in LADWP's efforts to build a clean energy future by expanding renewable energy to 33 percent of its total power supply and eliminating coal power. Solar energy from the Moapa plant will contribute 2.4 percent toward LADWP's renewable energy portfolio. This transformational goal also includes reducing energy use by at least 10 percent through energy efficiency measures; expanding local solar and other forms of distributed generation; initiating a robust demand-response program; and rebuilding local power plants to better integrate renewable energy and be more flexible to meet peak demand.

Nevada's Renewable Energy Boom

[Fierce Energy, Mar. 26] Since 2010, Nevada has invested $5.5 billion in clean energy, creating a renewable energy boom that includes the state's first utility-scale wind farm, according to a new report by the Clean Energy Project NV. Clean energy investment in Nevada has accelerated rapidly in the past five years, leveraging national resources and the support and leadership of local, state and federal officials. Thanks to Nevada's widespread leadership and support for the clean energy economic sector, Nevada ranks sixth in the United States in installed solar capacity, representing an investment of more than $2.3 billion. As the sunniest state in the nation, Nevada has unlimited potential to expand its use of clean energy even further, creating more new jobs and drive the state's economy. Nevada's renewable energy boom is catching the attention of the industry as several national energy industry events gravitate to the area, including the American Wind Energy Association, the Geothermal Energy Association, the National Clean Energy Summit and the Solar Energy Industries Association.

Sempra, ConEdison Partner on Five Solar Projects

[Fierce Energy, Mar. 26] Sempra U.S. Gas & Power and Consolidated Edison (ConEdison) Development are partnering on five solar projects in Nevada and California, including Sempra's 250 MW Copper Mountain Solar 3 project near Las Vegas, and Consolidated Edison Development's CED California Holdings, LLC portfolio: the 50 MW Alpaugh 50, 20 MW Alpaugh North and 20 MW White River 1 facilities, all in Tulare County, as well as the 20 MW Corcoran 1 facility in Kings County. Upon finalizing the agreements, Sempra U.S. Gas & Power and Consolidated Edison Development will each own a 50 percent interest in the five solar facilities. The CED California Holdings projects are subject to regulatory approvals. Copper Mountain Solar 3 is currently under construction and, when completed, will be among the largest photovoltaic solar plants in the U.S., creating about 300 construction jobs at peak. Completion of the first 125 MW is expected by the end of 2014, with the remaining 125 MW expected to be completed in 2015. Sempra U.S. Gas & Power will provide operations and maintenance services when the facility is operational.

Wind Power Generation Hits 10,000 MW Mark in Texas

[EL & P, Mar. 28] March winds brought a new wind power record to the Electric Reliability Council of Texas (ERCOT) region Wednesday evening, March 26, when instantaneous output reached a record 10,296 MW at 8:48 p.m. At the time the new record was set, wind generation was providing nearly 29 percent of the 35,768 MW of electricity being used on the ERCOT grid. The new record beats the previous record set earlier this month by more than 600 MW, and the American Wind Energy Association (AWEA) said it was a record for any U.S. power system. Of the total power generation at the time, 1,433 MW came from wind generators on the Gulf Coast, while 8,863 MW came from other regions. Most came from West Texas, where transmission projects in the Competitive Renewable Energy Zones were recently completed to transport more power from that region to more populated areas of the state. One MW is enough electricity to power about 200 homes during periods when electric use is highest and about 500 homes during mild weather when less electricity is being consumed.

Wyoming Wind Could Save California Ratepayers $1B

[Ravalli Republic, Mar. 29] CASPER, WY – California ratepayers would save up to $1 billion annually by buying Wyoming wind power, a new study commissioned by the Wyoming Infrastructure Authority shows. Wyoming policymakers have made a push in recent years to sell the state's wind resources to the Golden State. California is required under state law to purchase 33 percent of all electricity generation from renewable sources by 2020 and represents a potentially lucrative market for renewable power producers across the west. But Wyoming officials first have to sell their California counterparts on Cowboy State wind. Among the chief hurdles: persuading Golden State policymakers to pick Wyoming projects over California wind. The study conducted by National Renewable Energy Laboratory represents Wyoming's latest attempt. The report found that Wyoming wind projects were more cost-efficient than California equivalents, despite the need to build transmission lines between the two states. The efficiency was largely a matter of scale. The Wyoming wind projects have more capacity and are thus able to cover the transmission costs. The Cowboy State project's benefit-to-cost ratio was more than double those in California, the study found.

ARIZONA STATE INCENTIVES/POLICIES

ARIZONA COMMERCE AUTHORITY (ACA)

- Angel Investment Tax Credit Program - The main objective of the Angel Investment program is to expand early stage investments in targeted Arizona small businesses. The program accomplishes this goal by providing tax credits to investors who make capital investment in small businesses certified by the Arizona Commerce Authority (ACA). To view the list of businesses that have been certified under this program please click here. LEARN MORE

- Arizona Innovation Accelerator Fund - The Arizona Innovation Accelerator Fund Program is an $18.2 million loan participation program funded through the U.S. Department of Treasury's SSBCI and managed by the Arizona Commerce Authority. The goal of this program is to stimulate financing to small businesses and manufacturers, in collaboration with private finance partners, to foster business expansion and job creation in Arizona. LEARN MORE

- Arizona Innovation Challenge - The Arizona Innovation Challenge is an investment in the minds of talented entrepreneurs in Arizona and around the world. The ACA will award $1.5 million to the most promising technology ventures that participate in the Challenge (awards may range from $100,000 to $250,000). LEARN MORE

- AZ Fast Grant - Enables Arizona-based technology companies to initiate the commercialization process. Total funds available for this grant round are $175,000. Maximum awards of $5,000 and $20,000 will enable companies to accomplish one of four scopes of work. LEARN MORE

- AZ Step Grant - Grant funding from the U.S. Small Business Administration (SBA) with matching funds contributed by the Arizona Commerce Authority (ACA) offering a number of services and tools to Arizona small businesses as they go global for the first time with sales or enter new, international markets. LEARN MORE

- Commercial/Industrial Solar Energy Tax Credit Program - The primary goal of the Commercial/Industrial Solar Energy Tax Credit Program is to stimulate the production and use of solar energy in commercial and industrial applications by subsidizing the initial cost of solar energy devices. The program achieves this goal by providing an Arizona income tax credit for the installation of solar energy devices in Arizona business facilities. LEARN MORE

- Healthy Forest - The primary goal of the Healthy Forest Enterprise Incentives Program is to promote forest health in Arizona. The program achieves this by proving incentives for certified businesses that are primarily engaged in harvesting, processing or transporting of qualifying forest products. LEARN MORE

- Job Training Program offers job-specific reimbursable grants for employers creating new jobs or increasing the skill and wage level of their current employees. Deadline: Year Round. LEARN MORE

- Renewable Energy Tax Incentive Program offers a refundable income tax credit and property tax reduction to companies in solar, wind, geothermal and other renewable energy industries who are expanding or locating a manufacturing or headquarters operation in Arizona. The tax credit is up to 10% of the total qualified investment amount and the property tax benefit can reduce a company's property taxes by up to 75%. Deadline: Year Round. LEARN MORE

- Research and Development Tax Credit is an Arizona income tax credit for increased research and development activities conducted in this state. Starting in 2010, a qualifying company may be eligible to claim a partial refund of its current year excess R&D credit. Applicants may apply at the end of their tax year but prior to filing a tax return with Revenue. LEARN MORE

- Quality Jobs Tax Credit Program - The primary goal of the Quality Jobs Tax Credit program is to encourage business investment and the creation of high-quality employment opportunities in the state. The program accomplishes this goal by providing tax credits to employers creating a minimum number of net new quality jobs and making a minimum capital investment in Arizona. LEARN MORE

- Bonds Administered by the Arizona Commerce Authority
  - Private Activity Bonds (PAB) - Tax exempt bond financing, for federal purposes, offers an alternative financing mechanism for certain projects. LEARN MORE
  - Qualified Energy Conservation Bonds (QECB) - Tax credit bonds are available as an alternative financing mechanism for certain green projects. LEARN MORE

- Federal Programs
  - Small Business Innovation Research (SBIR) Program - SBIR is a competitive program that encourages small businesses to explore their technological potential, as well as, providing incentive to profit from its commercialization. LEARN MORE
  - Small Business Technology Transfer (STTR) Program - STTR is an important small business program that expands funding opportunities to meet the nation's scientific and technological challenges in the 21st century. LEARN MORE
  - Work Opportunity - The Work Opportunity Tax Credit (WOTC) is a federal tax credit of up to $9,000 that Congress provides to private-sector businesses for hiring individuals from nine target groups who have consistently faced significant barriers to employment. LEARN MORE

- Pollution Control Tax Credit - Provides a 10 percent income tax credit on the purchase price of real or personal property used to control or prevent pollution.

- Renewable Energy Production Tax Credit - An income tax credit awarded to utility-scale generation systems based on the amount of electricity produced

annually for a 10-year period using solar or wind energy. Questions can be directed to Georganna Meyer (602-716-6927) or Elaine Smith (602-716-6924).

- Sales Tax Exemption for Machinery and Equipment
  Exemptions are available for:

  1. Machinery or equipment used directly in manufacturing, see ARS 42-5159(B)(1).
  2. Machinery, equipment or transmission lines used directly in producing or transmitting electrical power, but not including distribution, see ARS 42-5159(B)(4).
  3. Machinery or equipment used in research and development, see ARS 42-5159(B) (14).

Questions can be directed to Christie Comanita (602-716-6791).

- Solar Liquid Fuel Tax Credit - Income tax credits are available for research and development, production and delivery system costs associated with solar liquid fuel. Questions can be directed to Georganna Meyer (602-716-6927) or Elaine Smith (602-716-6924).

- Database of State Incentives for Renewables and Efficiency (DSIRE)
  - Arizona Incentives/Policies
  - Federal Incentives/Policies
  - Solar Policy News - DSIRE provides summaries of current solar policy developments and an archive of past solar policy developments. Current solar news appears below the news archive, which is searchable by several criteria.

GRANTS

The following solicitations are now available:
(Click on title to view solicitation)

- Renewable Carbon Fibers - Concept Papers Submission Deadline: 03/03/2014 at 5:00 P.M. Eastern Standard Time. Submission Deadline for Full Applications: 04/11/2014 at 5:00 P.M. Eastern Standard Time

- Geothermal Play Fairway Analysis - Close Date: April 11, 2014

- U.S. Wind Manufacturing: Taller Hub Heights to Access Higher Wind Resources and Lower Cost of Energy - Close Date April 14, 2014

- Building Energy Efficiency Frontiers and Incubator Technologies (BENEFIT) - 2014 - Close Date April 21, 2014

- Clean Energy Manufacturing Innovation Institute for Composites Materials and Structures - Close Date: April 22, 2014

- Integrated Enhanced Geothermal Systems (EGS) Research and Development - Close Date April 30, 2014

- Low Temperature Geothermal Mineral Recovery Program - Close Date May 2, 2014

- Commercial Building Technology Demonstrations – Concept Paper Submission Deadline: March 31, 2014. Full Application Submission Deadline: May 19, 2014.

- Bioenergy Technologies Incubator - Close Date: May 23, 2014
- Advanced Fossil Energy Projects - Solicitation Number: DE-SOL-0006303 - Expiration Date 11/30/2016
- Sunshot "Race to the Roof" Initiative - Registration Due October 31,2014
- Repowering Assistance Program – Ongoing
- Rural Business Enterprise Grants - Ongoing
- Rural Business Opportunity Grants – Ongoing
- Sustainable Agriculture Research and Education Grants - Ongoing
- Renewable Energy RFP's - Solicitations for Renewable Energy Generation, Renewable Energy Certificates, and Green Power – Various Deadlines

- U.S. Dept. of Agriculture - Rural Development Grant Assistance

ENERGY-RELATED EVENTS

2014

- West Coast Storm & Disaster Planning
  April 2-3, 2014 Portland, OR
- Transmission Expansion in the West
  April 7-8, 2014 Scottsdale, AZ
- ASHRAE High Performance Building Conference
  April 7-8, 2014 San Francisco, CA
- Clean Tech Future Conference III
  April 9, 2014 Phoenix, AZ
- Arizona Building Officials Conference
  April 14-18, 2014 Tucson, AZ
- Green Tech's Media Solar Summit 2014
  April 14-16, 2014 Phoenix, AZ
- International Geothermal Energy Forum
  April 23-24, 2014 Washington, DC
- 32nd Annual Solar Potluck & Exhibition
  April 26, 2014 Catalina State Park
- 11th Annual Construction in Indian Country Nat'l., Conference
  April 28-30, 2014 Chandler, AZ
- VerdeXchange Arizona
  April 30-May 2, 2014 Phoenix, AZ
- Cybersecurity Summit
  May 7, 2014 Scottsdale, AZ
- AWEA Windpower 2014
  May 5-8, 2014 Las Vegas, NV

- AZ Water Association Annual Conference & Exhibition
  May 7-9, 2014 Glendale, Arizona.
- Beyond the Border: Arizona Trade Mission to Mexico City & Guadalajara
  May 12-16, 2014
- Sunshot Grand Challenge Summit 2014
  May 19-22, 2014 Anaheim, CA
- Native American Economic Development & Energy Projects Conference
  June 16-17, 2014 Anaheim, CA
- AZBio Expo 2014
  June 19, 2014 Scottsdale, AZ
- 32nd Annual West Coast Energy Management Congress
  June 25-26, 2014 Seattle, WA
- Solar 2014: 43rd Annual Conference
  July 6-10, 2014 San Francisco, CA
- National Geothermal Summit
  August 5-6, 2014 Reno, NV
- 2014 ACEEE Summer Study on Energy Efficiency in Buildings
  August 17-22, 2014 Pacific Grove, CA
- EPI's 4th Annual Energy Policy Research Conference
  September 4-5, 2014 San Francisco, CA
- HTUF 2014 National Meeting - The Forum for Action in High-Efficiency Commercial Vehicles
  September 22-24, 2014 Argonne, National Lab Argonne, IL
- Geothermal Energy Expo
  September 28-October 1, 2014 Portland, OR
- Governor's Celebration of Innovation
  November 13, 2014
- ASU Sustainability Series Events
- Green Building Lecture Series
  Granite Reef Senior Center Scottsdale, AZ